

## Claims

- [c1] What is claimed is:
1. A method for controlling a network connection of the terminal in a wireless network system, the terminal capable of wirelessly transmitting and receiving data, the wireless network system comprising a plurality of wireless networks, the different wireless networks having different identities capable of being transmitted wirelessly by each wireless network, the terminal comprising:
    - a plurality of distinct sorting pointers, each distinct sorting pointer representing a unique priority;
    - a network database for recording a plurality of predetermined identities;
    - a plurality of configuration tables, each configuration table for corresponding one predetermined identity to one unique sorting pointer, and each configuration table having at least a unique predetermined identity which corresponds to a sorting pointer; and
    - a status pointer for representing an operational location and time;
 the method comprising:
    - receiving identities of the plurality of wireless networks via wireless transmission;
    - choosing a configuration table from the plurality of configuration tables according to the status pointer;
    - comparing the predetermined identity of the chosen configuration table with the identities received, and if any of the plurality of identities received matches the predetermined identity, then choosing an identity according to the sorting pointer corresponding to the status pointer; and
    - wirelessly connecting to the wireless network corresponding to the chosen identity.
  - [c2] 2. The method of claim 1 wherein when choosing an identity according to the matched sorting pointer corresponding to the predetermined identity, the predetermined identities matching the chosen identity have sorting pointers with higher priorities.
  - [c3] 3. The method of claim 1 wherein the network database has a plurality of key IDs stored in the database with each of key IDs corresponding to a predetermined

identity; and when wirelessly connecting to the wireless network which is corresponding to the chosen identity, data being uploaded or downloaded between the terminal and the wireless network is encrypted according to the key ID corresponding to the network identity.

- [c4] 4.The method of claim 3 wherein when connecting to the wireless network corresponding to the chosen identity via wireless transmission, a certification program is first processed, then the data being uploaded or downloaded between the terminal and the wireless network is encrypted according to the key ID which is corresponding to the wireless identity.
- [c5] 5.The method of claim 1 wherein each wireless network has at least an access point, and the identity of each wireless network is transmitted by the access point of each wireless network.
- [c6] 6.The method of claim 1 wherein the terminal is a notebook computer.
- [c7] 7.The method of claim 1 wherein the plurality of wireless networks are capable of responding to a probe signal by wirelessly transmitting the identity corresponding to the wireless network, the method further comprising: sending out a probe signal through the terminal before receiving the plurality of identities of the wireless network via wireless transmission, and having the plurality of wireless networks respond to their own corresponding identities to make the terminal capable of receiving the identities corresponding to the plurality of wireless networks.
- [c8] 8.The method of claim 1 wherein each of the wireless networks is capable of continuously sending out a beacon signal comprising a corresponding identity of the wireless network, and the terminal is capable of receiving the plurality of identities corresponding to the wireless networks.
- [c9] 9.The method of claim 1 further comprising: choosing an identity via a predetermined method when comparing the predetermined identities of the chosen configuration table to the identities received from the terminal results in no received identities being identical to any of the predetermined identities.

- [c10] 10.The method of claim 9 wherein the predetermined method chooses an identity randomly.
- [c11] 11.The method of claim 9 further comprising: .  
wirelessly connecting to the wireless network which is corresponding to the chosen identity; and  
updating the chosen configuration table according to the chosen identity.
- [c12] 12.The method of claim 11 further comprising:  
updating all configuration tables according to the chosen identities.